DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
Washington, DC 20314-1000

Technical Letter
No. 1110-3-498

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Engineering and Design
DESIGN OF COLLECTIVE PROTECTION SHELTERS TO RESIST CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL (CBR) AGENTS

1. Purpose. This letter provides information and guidance for the design of collective protection (CP) systems. Collective protection provides a toxic-free area (TFA) where personnel can function without individual protective equipment such as a mask and protective garments.

2. Applicability. This letter applies to all HQUSACE elements and USACE commands having military construction and design responsibility.

3. References. Appendix A contains a list of referenced and related publications.

4. Distribution. Approved for public release; distribution is unlimited.

5. Background. Chemical, biological, or radiological agent threats can come from a wartime attack, a terrorist attack, or from an industrial accident. Protection can be achieved by evacuating the affected area or by using shelters or individual protective equipment (IPE). When evacuation is logistically impossible, passive shelters that use only sealing measures provide limited protection for a short period. For increased protection and longer durations, a preplaced collective protection ventilation system is required.

6. Action. Pending publication of permanent guidance, the enclosed information will be used to assist HQUSACE, major subordinate commands, district offices, and FOA in the management and design of collective protection systems.

7. Implementation. This letter will have routine application for all future military projects as defined in paragraph 8c, ER 1110-345-100.

FOR THE COMMANDER:

DWIGHT A. BERANEK, P.E.
Chief, Engineering and Construction Division
Directorate of Military Programs

7 Appendices
App A - References
App B - Collective Protection for Facilities
App C - Class I, Filtration with Pressurization
App D - Class II, Filtration with Little or No Pressurization
App E - Filtration Equipment
App F - Airlocks and Personnel Processing
App G - Facility Air Leakage Rates